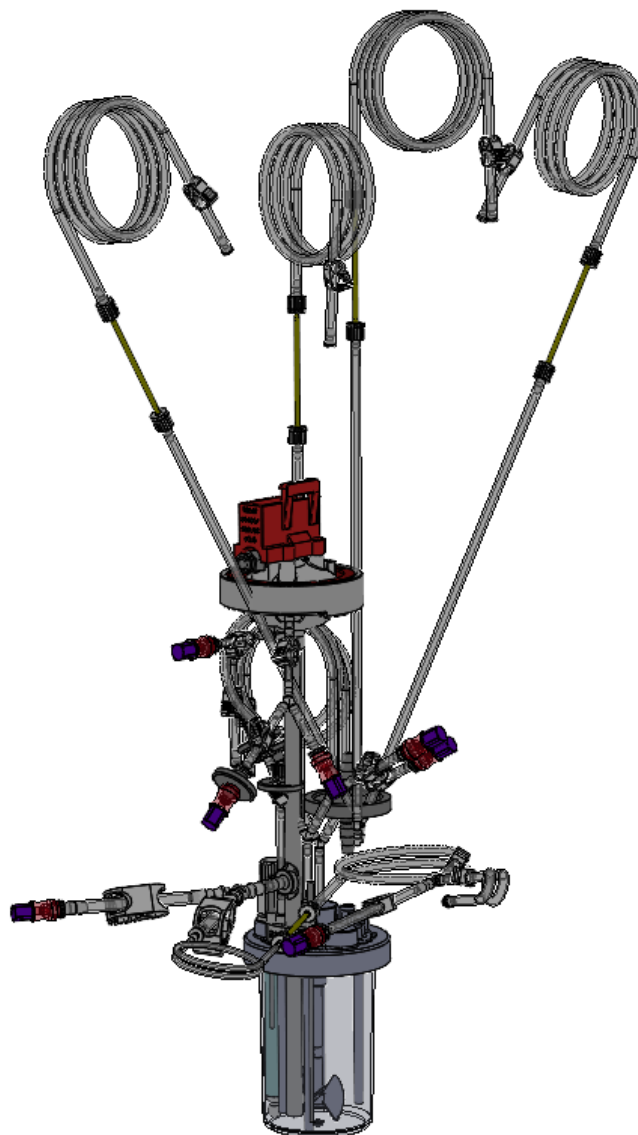


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Revision 1.0

Customer name and address	####
Date of contact	
Number of SUB's	
Time of delivery, week from order	
Configurator Version	
Order number	

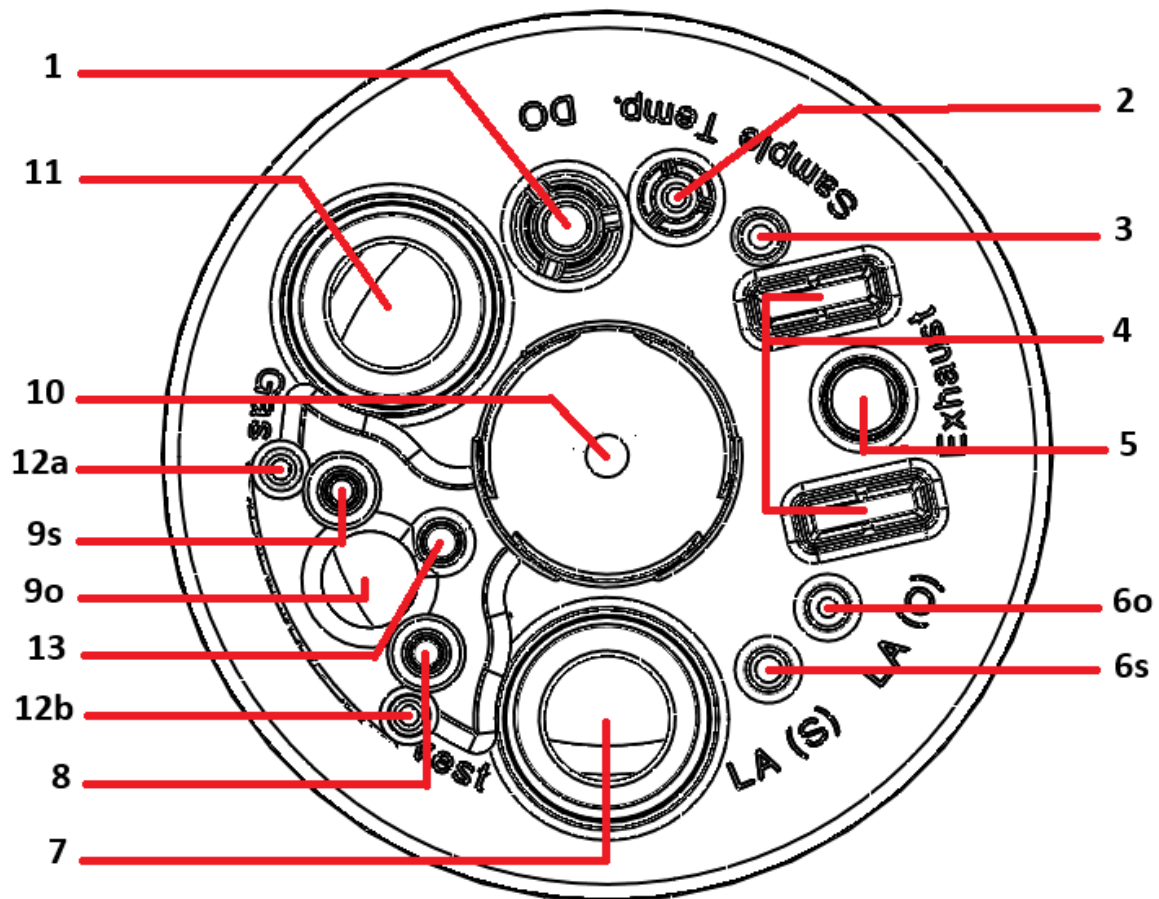
CellRetention-300-DASbox



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Revision 1.0

Head plate layout:



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Port description:

Port #	Label	Purpose	Tubing
1	DO	DO sensor port. (Eppendorf specific)	N/A.
2	Temp.	Temperature sensor. (Eppendorf specific)	N/A.
3	Sample	Liquid removal (Sampling) ID2,4mm dip-tube, close to bottom. A) Manual Sampling B) Auto sampling Line (e.g. MAST) C) Sterile Air Filter	OD6 x ID3 x 50mm silicone hose, Y-connection (Y230): A. OD6 x ID3 x 50 mm silicon hose, clamp, female Luer-lock (FTLL230), sterile filter OD25 (8 cm²), and closed with male Luer plug. (MTTLP) OD6 x ID3 x 30 mm silicon hose, Y-connection (Y230): B. OD6.4 (1/4") x ID3.2 (1/8") x 500 mm C-flex hose, clamp and closed with a plug. (PIP230) C. OD6 x ID3 x 50 mm silicon hose, clamp, female Luer-lock (FTLL230), swabable valve and plug. See "Sample line" for more information.
4	N/A	Mounting position for exhaust hose cooler. (Eppendorf specific)	N/A.
5	Exhaust	Exhaust line	Eppendorf original silicone hose, OD50 (16cm ²) sterile filter.
6 O	LA (O)	Fluid Addition /Removal – Overlay/headspace ID 2.7mm drip guide A) Anti-foam addition B) Inoculation C) Overlay Gassing	Eppendorf original 70 mm silicone hose (OD 1/4" x ID1/8"), Y-connection (Y230): A. OD6 x ID3 x 50 mm silicon hose, clamp, female Luer-lock (FTLL230), sterile filter OD25 (8 cm²), and closed with male Luer plug. (MTTLP) OD6 x ID3 x 30 mm silicon hose, Y-connection (Y230): B. OD6.4 (1/4") x ID3.2 (1/8") x 500 mm C-flex hose, clamp and closed with a plug. (PIP230) C. OD6 x ID3 x 50 mm silicon hose, clamp, female Luer-lock (FTLL230), swabable valve and plug. See "Sample line" for more information.
6 S	LA(S)	Aeration – <i>submerge</i> ID3.0 mm dip tube Micro sparger (Por. 3 – 16-40µm) 10 mm from the bottom.	Small OD10 x ID6 x 15 mm silicone hose for extra security. OD8 x ID5 x 80 mm silicone hose, female Luer-Lock (FTLL240), sterile filter OD25 (8 cm ²), and closed with male Luer plug. (MTTLP)

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Port #	Label	Purpose	Tubing
7	PG13.5 port	Spare Sensor port	Spare PG13.5 port , e.g. for 120 mm long Re-Usable-Sensor inserted by customer on-site
8	N/A	Liquid Addition -Submerge ID2.7 mm dip tube. A) Media. (Perfusion) B) Glucose.	OD6 x ID3 x 50mm silicone hose, Y-connection (Y230): A. OD6 x ID3 x 300 mm silicone hose, male Luer-Lock (MTLL230), Bioprene pump-head tubing (ID1.0 mm x OD3.1 mm), male Luer-Lock (MTLL230), OD6.4 (1/4") x ID3.2 (1/8") x 1000 mm C-flex hose, clamp and closed with a plug. (PIP230) B. OD6 x ID3 x 300 mm silicone hose, male Luer-Lock (MTLL230), Bioprene pump-head tubing (ID1.0 mm x OD3.1 mm), male Luer-Lock (MTLL230), OD6.4 (1/4") x ID3.2 (1/8") x 1000 mm C-flex hose, clamp and closed with a plug. (PIP230)
9 O	N/A	Perfusion port (ATF Suction/Return) <i>SUBmerged HFF</i> Inlet 11 mm from the bottom (Parallel to tube sparger 9S)	See "ATF assembly" for more information. See "Single-Use-Pump" for more information
9S	N/A	Liquid Addition/Removal – submerge ID2,7mm Dip-tube, close to bottom A) Cell Bleed	OD6 x ID3 x 300 mm silicone hose, male Luer-Lock (MTLL230), Bioprene thermoplastic pump-head tubing (ID1.0 mm x OD3.1 mm), male Luer-Lock (MTLL230), OD6.4 (1/4") x ID3.2 (1/8") x 1000 mm C-flex hose, clamp and closed with a plug. (PIP230)
10	N/A	Magnetic coupling for Maxon overhead drive motor (DASbox)	N/A.
11	PG13.5 port	Sensor port – pre-installed pH SUS	Hamilton OneFerm pH SUS, K8 electrical connector, 120 mm long
12 A	N/A	SS level-sensor Liquid level monitoring (Estimated 65 mm from bottom, at 200ml mark)	For 2mm banana plug
12 B	N/A	SS level-sensor Liquid level monitoring (Estimated 9 mm from bottom)	For 2mm banana plug
13	N/A	Liquid Addition - Submerge. ID3.2mm dip tube A) Base	OD6 x ID3 x 300 mm silicone hose, male Luer-Lock (MTLL230), Bioprene pump-head tubing (ID1.0 mm x OD3.1 mm), male Luer-Lock (MTLL230), OD6.4 (1/4") x ID3.2 (1/8") x 1000 mm C-flex hose, clamp and closed with a plug. (PIP230)

The ATF method assembly:

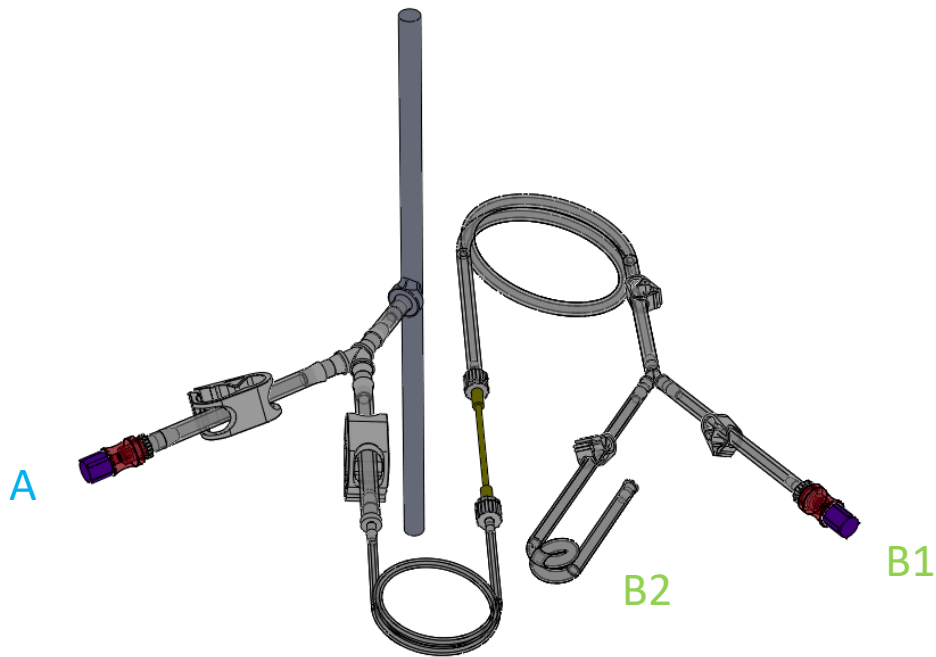
HFF: Custom Meissner SeptraPor®: "XFCM20C012-XX1" - 0.2µm pore size with ID1.0 mm fibers (# lumen/fibers = 13), Length (L) = 300mm, with a surface area of 110 cm². 1 x Permeate port

Permeate; OD8 x ID5 x 40 mm silicone hose, Y-connection (260-6005):

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- A. **Wash-Line:** OD8 x ID5 x 100 mm silicone hose, clamp, female Luer-Lock (FTLL360) and swabable valve.
- B. **Harvest-Line:** OD8 x ID5 x 100 mm silicone hose, clamp, straight through reducer (3050), ID1.6 x OD4.8 x 450 mm silicone hose, male Luer-Lock (MTLL220), Bioprene pump-head tubing (ID1.0 mm x OD3.1 mm), male Luer-Lock (MTLL230), ID3.2 (1/8") x OD6.4 (1/4") x 600 mm C-flex hose, clamp, Y-connection (240-6005):
 - 1. Male Luer-Lock (MTLL230), ID3.2 (1/8") x OD6.4 (1/4") x 100 mm C-flex hose, clamp, female Luer-Lock (FTLL230), and swabable valve.
 - 2. Female Luer-Lock (FTLL230) + FSLLR, ID3.2 (1/8") x OD6.4 (1/4") x 400 mm C-flex hose, clamp and plug. (PIP230)

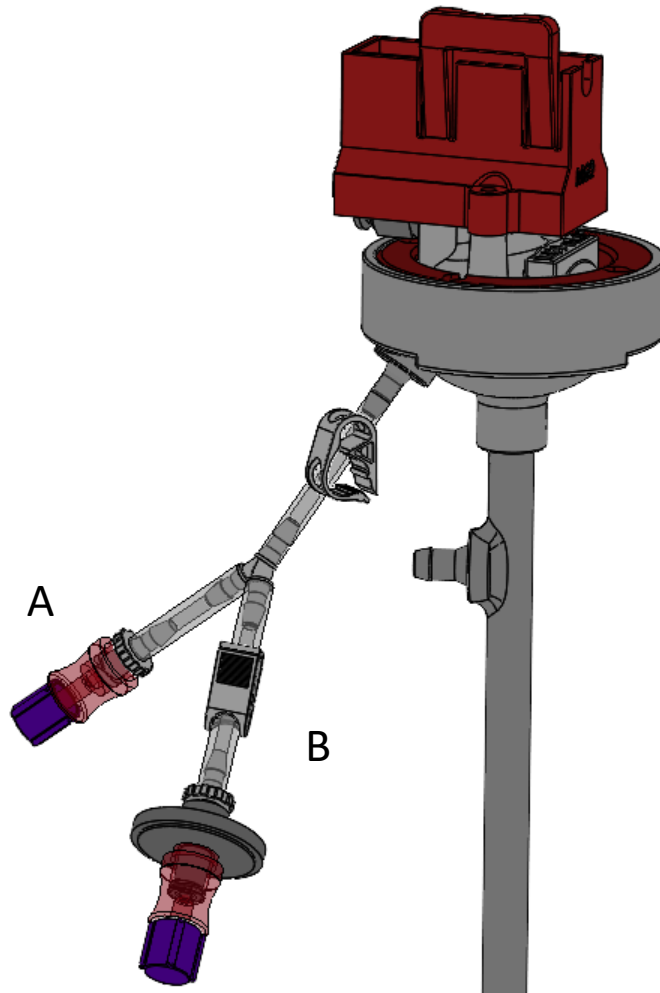


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Single-Use-Pump:

The diaphragm pump used for this product is Thalia TM60 combined with Meissner SepraPor® 0.2µm Hollow-Fiber-Filter (HFF) mounted SUBmerged in the vessel.



Pump “de-gassing” Port:

OD6 x ID3 x 50 mm silicone hose, hose clamp, Y-connection (Y230):

- A) OD6 x ID3 x 30 mm silicone hose, female Luer connection (FTLL230), swabable valve and male Luer-Lock cap (Qosina 65372)
- B) OD6 x ID3 x 50 mm silicone hose, clamp, female Luer connection (FTLL230), OD25 sterile filter, swabable valve and male Luer-Lock cap (Qosina 65372).

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Sampling Line:

OD6 x ID3 x 50mm silicone hose, Y-connection (Y230):

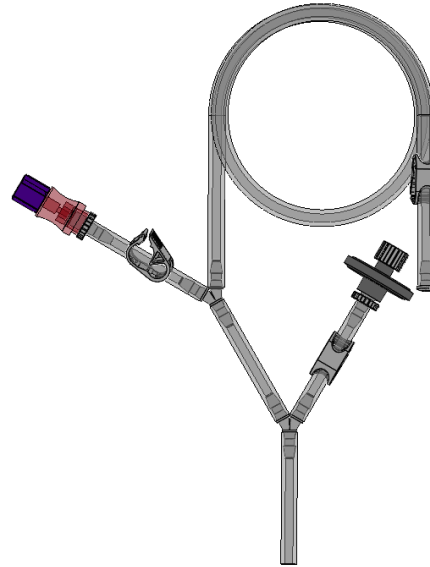
B. OD6 x ID3 x 50 mm silicon hose, clamp, female Luer-lock (FTLL230), sterile filter OD25 (8 cm²), and closed with male Luer plug. (MTTLP)

- OD6 x ID3 x 30 mm silicon hose, Y-connection (Y230):

B. OD6.4 (1/4") x ID3.2 (1/8") x 500 mm C-flex hose, clamp and closed with a plug. (PIP230)

C. OD6 x ID3 x 50 mm silicon hose, clamp, female Luer-lock (FTLL230), swabable valve and plug.

See "Sample line" for more information.



Additional Information:

- Include one (3D printed) P-SUB vessel stand per box with 4 P-SUBs
- Include level marks on vessel outside (in front of Exhaust port)

Designed by

PerfuseCell-Cronus-PCS A/S

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DK-2730 Herlev

Denmark

www.perfusecell.com